

First Hit

L2: Entry 1 of 2

File: JPAB

Aug 6, 1996

PUB-NO: JP408198770A

DOCUMENT-IDENTIFIER: JP 08198770 A

TITLE: ANTI-OXIDIZING JUICE AND PRODUCTION THEREOF

PUBN-DATE: August 6, 1996

## INVENTOR-INFORMATION:

NAME

COUNTRY

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## ASSIGNEE-INFORMATION:

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COUNTRY

NIKKEN FOOD KK

APPL-NO: JP07006629

APPL-DATE: January 19, 1995

INT-CL (IPC): A61K 35/78; A23L 2/52; A23L 1/30

## ABSTRACT:

PURPOSE: To give an anti-oxidizing fruit juice which is doubled in its anti-oxidizing power, thus high effective for aging control and internal beautifulness.

CONSTITUTION: A fruit juice from a plurality of fruits such as grape, apple, berry, orange and the like, or a combination thereof with vegetable juices is combined with a naturally occurring anti-oxidizing agent such as green tea extract in an amount of 0.01-10wt.%, water is added to adjust the concentration, made homogeneous by stirring to give this anti-oxidizing juice. A plurality of, if possible, 3 or more different kinds of naturally occurring juices are combined to give an anti-oxidizing juice having doubled or more anti-oxidizing power with taste and palatability increased. The naturally occurring antioxidant mainly contains a natural product or an extract therefrom containing polyphenols as a main component.

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First Hit**End of Result Set**

L2: Entry 2 of 2

File: DWPI

Aug 6, 1996

DERWENT-ACC-NO: 1996-408327

DERWENT-WEEK: 199641

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TITLE: Anti-oxidn juice and its prodn - comprises several fruit juices opt contg vegetable juice and antioxidant

## PATENT-ASSIGNEE:

ASSIGNEE	CODE
NIKKEN FOOD KK	NIKKN

PRIORITY-DATA: 1995JP-0006629 (January 19, 1995)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
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## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 08198770A	January 19, 1995	1995JP-0006629	

INT-CL (IPC): A23L 1/30; A23L 2/52; A61K 35/78

ABSTRACTED-PUB-NO: JP 08198770A

## BASIC-ABSTRACT:

Juice comprises several fruit juices, opt. contg. vegetable juice, with a natural antioxidant added to provide dual anti-oxidn. property.

The fruit juices are of grapes, apples, berries and mandarins; the natural antioxidant is polyphenols or extract contg. polyphenols at concns. of 0.01-10% in whole compsn., and prodn. of the anti-oxidn. juice from those disclosed in (1) and (2) is pref. Fruit juice (eg grapes, apples, berries and mandarins) are mixed with an antioxidant of polyphenols to improve antioxidant property.

ADVANTAGE - Control of ageing with aesthetic effects.

In an example, in 5.16kg of purified water, 0.3kg of blackcurrant conc. juice, 0.54 kg of apple conc. juice, 4 kg of grape juice, 2.5g of green tea extract contg. crude catechin at a rate of 60% and 0.2kg of grape peel EtOH extract gave a juice of Brix 13.4 contg. 0.025% of crude catechin. The juice exhibited 1,000 U/ml of superoxide radical eradicating effect.

CHOSEN-DRAWING: Dwg. 0/0

TITLE-TERMS: ANTI OXIDATION JUICE PRODUCE COMPRISE FRUIT JUICE OPTION CONTAIN VEGETABLE JUICE ANTIOXIDANT

DERWENT-CLASS: B04 D13

CPI-CODES: B04-A10G; B10-E02; B14-S08; D03-H01G; D03-H01P; D03-H01T2;

## **CHEMICAL-CODES:**

Chemical Indexing M1 \*01\*  
Fragmentation Code  
M423 M431 M782 M903 P714 Q211 V400 V406

Chemical Indexing M2 \*02\*

Fragmentation Code  
D013 D023 D120 G015 G100 H4 H405 H421 H444 H8  
M1 M113 M280 M320 M412 M431 M511 M520 M531 M540  
M782 M903 M904 P714 Q211  
Specfic Compounds  
04686M

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(22)出願日 平成7年(1995)1月19日	(72)発明者 越智 宏倫 静岡県袋井市春岡693-20 (74)代理人 弁理士 鈴木 正次

(54)【発明の名称】 抗酸化ジュースおよびその製造法

(57)【要約】 (修正有)

【目的】果実ジュース類の抗酸化性を倍増する方法の提供。

【構成】複数の果実類ジュースに、天然抗酸化物を添加して、抗酸化性を倍増する抗酸化ジュース。複数の果実類ジュースに天然抗酸化物又はその抽出物を0.01%～10%添加し、これに水を加えて濃度を調整し、攪拌して均質とした抗酸化ジュースの製造法。

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## 【特許請求の範囲】

【請求項1】複数の果実類ジュース又はこれに野菜ジュースを加入したものに、天然抗酸化物を添加して、抗酸化性を倍増したことを特徴とする抗酸化ジュース。

【請求項2】複数の果実類ジュースはぶどう類ジュース、りんご類ジュース、ベリー類ジュース、みかん類ジュースを複数配合させたことを特徴とする請求項1記載の抗酸化ジュース。

【請求項3】天然抗酸化物は、ポリフェノール類を主抗酸化成分として含む天然物またはその抽出物とし、添加量は全体の0.01%~10%とすることを特徴とした請求項1記載の抗酸化ジュース。

【請求項4】複数の果実類ジュースに天然抗酸化物又はその抽出物を0.01%~10%添加し、これに水を加えて濃度を調整し、攪拌して均質とすることを特徴とした抗酸化ジュースの製造法。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】この発明はジュース類の抗酸化性を通常の2倍以上とすることを目的とした抗酸化ジュースおよびその製造法に関するものである。

## 【0002】

【従来の技術】従来各種果実ジュースの単独又は複合ジュースが知られており、その多くは糖を添加して嗜好性を向上させている。またファイバー混入ジュース又はビタミン混入ジュースも知られている。

## 【0003】

【発明により解決すべき課題】前記従来のジュース類は、抗酸化性が低く、老化制御又は内面美容食品などとしては不十分であった。

【0004】特に風味良好であり、かつ嗜好性の高いジュース類は提案されていない。

## 【0005】

【課題を解決するための手段】然るにこの発明は、種々ある天然素材から抗酸化性を高めしかもおいしいものを選択すること行い適当な配合を決定して問題解決した。

【0006】即ち、本発明は天然素材の組合わせだけで通常のジュースの2倍以上抗酸化性を付与することを目指した。そのため種々検討した結果良好な結論を得た。

【0007】即ち物の発明は、複数の果実類ジュース又はこれに野菜ジュースを加入したものに、天然抗酸化物を添加して、抗酸化性を倍増したことを特徴とする抗酸化ジュースである。また複数の果実類ジュースはぶどう類ジュース、りんご類ジュース、ベリー類ジュース、みかん類ジュースを複数配合させたものであり、天然抗酸化物は、ポリフェノール類を主抗酸化成分として含む天然物またはその抽出物とし、添加量は全体の0.01%~10%とすることを特徴としたものである。次に製造法の発明は複数の果実類ジュースに天然抗酸化物又はそ

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の抽出物を0.01%~10%添加し、これに水を加えて濃度を調整し、攪拌して均質とすることを特徴とした抗酸化ジュースの製造法である。

【0008】果実ジュースは通常のジュース原料の中から抗酸化性の高いものを選択した結果、ブラックカラント（黒すぐり）ジュース、ラズベリージュースが抗酸化性が高いことがわかり、素材の1部とした。ESRによるスーパー オキサイド消去活性値はブラックカラントジュースは44000ユニット/gであり、ラズベリージュースは1500ユニット/gであり素材として利用した。また風味を調整するためにアップルジュースとマスカットジュースも組み合わせた。それぞのスーパー オキサイド消去活性値は450ユニット/g、850ユニット/gであった。

【0009】これらの素材を味と抗酸化性の面で組合せをいくつか検討した。

【0010】天然抗酸化物としてはジュースに適合するフェノール類を多く含むものを選択した。緑茶抽出物（熱湯抽出の粗カテキン）、ぶどう種子抽出物（メルローぶどう種子エクノール抽出物）、ぶどう皮抽出物（カルベネぶどう皮エタノール抽出物）などが適当であった。それぞのスーパー オキサイド消去活性値は64000ユニット/g、66800ユニット/g、128430ユニット/gであった。果実ジュースの種類に応じてこの他の天然抗酸化物を使用したり配合の割合を変えていろいろなジュースを得ることができる。抗酸化性を通常品のジュースの3倍以上を確保することが本発明の目標であり、複数の抗酸化性の高い素材を組合わせることにより可能となった。抗酸化性が高くても単品では味の面でジュースとしては適当でなく複数できれば3種類以上の果実ジュース素材の組合せが必要である。

【0011】ちなみに市販のジュースのスーパー オキサイド消去活性はA社アップルジュース、254ユニット/ml、B社キャロットフルーツジュース、101ユニット/ml、C社オレンジジュース、15ユニット/mlであった。そこで本発明ではスーパー オキサイド消去活性値の目標を800ユニット/ml以上とした。

【0012】この最終的製品は、濃縮の状態で瓶詰め、ストレートタイプで缶詰または瓶詰が考えられる。

【0013】次にこの発明の実施例について説明する。

## 【0014】

【実施例1】ブラックカラント濃縮ジュース(Brix 6.5) 0.3kg、アップル濃縮ジュース(Brix 4) 0.54kg、グレープジュース(Brix 8) 4kg、浄水器を通した水5.16kg、緑茶抽出物粗カテキン(カテキン含有率60%) 2.5g、カルベネぶどう皮エタノール抽出物0.2kgを混合し、Brix 13.4のジュースを調整した。粗カテキンの比率は0.025%とし、抗酸化性が高くしかも味に影響のない程度の比率とした。このジュースは、濃い赤ワイン色

を呈し、パネルテストにおいて、風味良好で、酸味、甘味のバランスがとれた深みのある味との評価を得ることができた。ESR法により活性酸素の一種であるスーパーオキシドラジカル消去活性値（抗酸化活性）を測定したところ、1,000ユニット／mlを有し、市販一般清涼飲料に比べて格段に高い値を示した。

## 【0015】

## 【実施例2】オレンジ濃縮ジュース (Brix 65)

0.5kg、アップル濃縮ジュース (Brix 74)  
0.45kg、キャロットジュース (Brix 15.8)  
3.3kg、浄水器を通した水5.7kg、粗カテキン（カテキン含有率60%）2.5g、メルローぶどう種子エタノール抽出物0.2kgを混合し、Brix 12.5のジュースを調整した。粗カテキンの比率は0.025%とし、抗酸化性が高くしかも味に影響のない程度の比率とした。このジュースは、配合例1よりもさらに濃い赤ワイン色を呈し、パネルテストにおいて、風味良好で、酸味が強く清涼感があり、しかも深みのある味との評価を得ることができた。ESR法により活性酸素の一種であるスーパーオキシドラジカル消去活性値（抗酸化活性）を測定したところ、1,250ユニット／mlを有し、配合例1と同様に市販一般清涼飲料に比べて格段に高い値を示した。

## 【0016】

## 【実施例3】アップル濃縮ジュース (Brix 74)

0.68kg、グレープジュース (Brix 15.8) 5kg、浄水器を通した水4.32kg、粗カテキン（カテキン含有率60%）10gを混合し、Brix 13.5のジュースを調整した。粗カテキン含有量は0.1%とし、ジュースの透明度と味に影響のない程度の比率とし

た。このジュースは、透明・淡褐色を呈し、パネルテストにおいて、風味良好で、酸味が弱く飲み易い味との評価を得ることができた。ESR法により活性酸素の一種であるスーパーオキシドラジカル消去活性値（抗酸化活性）を測定したところ、1,000ユニット／mlを有し、配合例1と同様に市販一般清涼飲料に比べて格段に高い値を示した。

## 【0017】

## 【実施例4】ストロベリー濃縮ジュース (Brix 6)

10 0.3kg、アップル濃縮ジュース (Brix 74)  
1.3kg、浄水器を通した水8.4kg、緑茶抽出物粗カテキン（カテキン含有率60%）5g、カルベネぶどう皮エタノール抽出物0.1kgを混合し、Brix 11.6のジュースを調整した。粗カテキンの比率は0.05%とし、抗酸化性が高くしかも味に影響のない程度の比率とした。このジュースは、美しい赤色を呈し、パネルテストにおいて、風味良好で、酸味、甘味のバランスがとれた深みのある味との評価を得ることができた。ESR法により活性酸素の一種であるスーパーオキシドラジカル消去活性値（抗酸化活性）を測定したところ、1,200ユニット／mlを有し、市販一般清涼飲料に比べて格段に高い値を示した。

## 【0018】

【発明の効果】この発明は複数種の果実ジュース類に天然抗酸化物を添加してその抗酸化性を倍増したので、これを飲用に供すれば、老化制御に効果があり、内面美容にも顕著な効果がある。

【0019】抗酸化性を有することにより生体細胞を賦活して老化を制御する。

# PATENT ABSTRACTS OF JAPAN

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(21)Application number : **07-006629**

(71)Applicant : **NIKKEN FOOD KK**

(22)Date of filing : **19.01.1995**

(72)Inventor : **OCHI HIROTOMO**

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## **(54) ANTI-OXIDIZING JUICE AND PRODUCTION THEREOF**

### **(57)Abstract:**

**PURPOSE:** To give an anti-oxidizing fruit juice which is doubled in its anti- oxidizing power, thus high effective for aging control and internal beautifulness.

**CONSTITUTION:** A fruit juice from a plurality of fruits such as grape, apple, berry, orange and the like, or a combination thereof with vegetable juices is combined with a naturally occurring anti-oxidizing agent such as green tea extract in an amount of 0.01-10wt.%, water is added to adjust the concentration, made homogeneous by stirring to give this anti-oxidizing juice. A plurality.of, if possible, 3 or more different kinds of naturally occurring juices are combined to give an anti-oxidizing juice having doubled or more anti-oxidizing power with taste and palatability increased. The naturally occurring antioxidant mainly contains a natural product or an extract therefrom containing polyphenols as a main component.

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### **LEGAL STATUS**

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[Date of extinction of right]

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] Antioxidation juice characterized by having added the natural antioxidation object to what joined two or more fruits juice or this in vegetable juice, and doubling antioxidation nature in it.

[Claim 2] Two or more fruits juice is antioxidation juice according to claim 1 characterized by carrying out two or more combination of grape juice, apple juice, berries juice, and the mandarin orange juice.

[Claim 3] It is the antioxidation juice according to claim 1 which used the natural antioxidation object as the natural product which contains polyphenol as a main antioxidation component, or its extract, and was characterized by making an addition into 0.01% - 10% of the whole.

[Claim 4] The manufacturing method of the antioxidation juice characterized by adding a natural antioxidation object or its extract 0.01% to 10% in two or more fruits juice, adding water to this, adjusting and agitating concentration, and supposing that it is homogeneous.

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[Translation done.]

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]**

[0001]

[Industrial Application] This invention relates to antioxidation juice aiming at making antioxidation nature of juice twice [ more than ] usual, and its manufacturing method.

[0002]

[Description of the Prior Art] Independent or compound juice of conventional various fruits juice is known, and the many add sugar and are raising palatability. Moreover, fiber mixing juice or vitamin mixing juice is also known.

[0003]

[Problem(s) to be Solved by the Invention] Said conventional juice had low antioxidation nature, and it was inadequate as aging control or inside cosmetics food.

[0004] Especially the high juice of palatability with good and flavor is not proposed.

[0005]

[Means for Solving the Problem] a choosing [ raise the appropriate antioxidation nature from the natural material which various this invention has by being alike, and ]-moreover-delicious thing deed -- the problem solving of the suitable combination was determined and carried out.

[0006] Namely, this invention aimed at giving the twice [ more than ] antioxidation nature of juice usual only in the combination of a natural material. Therefore, the conclusion with a good result considered variously was obtained.

[0007] That is, invention of an object is antioxidation juice characterized by having added the natural antioxidation object to what joined two or more fruits juice or this in vegetable juice, and doubling antioxidation nature in it. Moreover, it is characterized by for two or more fruits juice carrying out two or more combination of grape juice, apple juice, berries juice, and the mandarin orange juice, using a natural antioxidation object as the natural product which contains polyphenol as a main antioxidation component, or its extract, and making an addition into 0.01% - 10% of the whole. Next, it is the manufacturing method of the antioxidation juice characterized by for invention of a manufacturing method adding a natural antioxidation object or its extract 0.01% to 10% in two or more fruits juice, adding water to this, adjusting and agitating concentration, and presupposing that it is homogeneous.

[0008] As a result of choosing the high thing of antioxidation nature from the usual juice raw materials, fruits juice was understood that antioxidation nature is [ black KARANTO (black gooseberry) juice and raspberry juice ] high, and was made into the one section of a material. The black KARANTO juice of the super oxide elimination activity value by ESR was 44000 units /g, and raspberry juice is 1500 units /g, and was used as a material. Moreover, in order to adjust flavor, Apple Computer juice and Muscat juice were also combined. Each super oxide elimination activity value was 450 units /g, and 850 units /g.

[0009] Some combination was examined for these materials in respect of the taste and antioxidation nature.

[0010] The thing containing many phenols which suit juice as a natural antioxidation object was chosen.

The green tea extract (rough catechin of a boiling water extract), the grape seed extract (mel low grape seed ethanol extract), the grape hide extract (KARUBENE grape hide ethanol extract), etc. were suitable. Each super oxide elimination activity value was 640000 units /g, 66800 units /g, and 128430 units /g. According to the class of fruits juice, other natural antioxidation objects can be used, or the rate of combination can be changed and various juice can be obtained. It is the target of this invention to usually secure 3 or more times of the juice of elegance for antioxidation nature, and it became possible by combining the high material of two or more antioxidation nature. Even if antioxidation nature is high, as juice, it is not suitable in respect of the taste, and if more than one are made, the combination of three or more kinds of fruits juice materials is required of an item.

[0011] The super oxide elimination activity of commercial juice was A company Apple Computer juice, 254 units / ml, B company Carrots fruit juice, 101 units / ml, C company orange juice, 15 units / ml incidentally. So, in this invention, the target of a super oxide elimination activity value was carried out to more than 800 units / ml.

[0012] This final product can consider bottling in the state of concentration, and can consider canning or bottling with a straight type.

[0013] Next, the example of this invention is explained.

[0014]

[Example 1] 0.3kg [ of black KARANTO concentrated juice ] (Brix65), 0.54kg [ of Apple Computer concentrated juice ] (Brix74), and grape juice (Brix15.8) 4kg, 5.16kg [ of water which let the water purifier pass ], and green tea extract rough catechin (60% of catechin content) 2.5g, and 0.2kg of KARUBENE grape hide ethanol extracts were mixed, and the juice of Brix13.4 was adjusted. The ratio of a rough catechin was made into 0.025%, and antioxidation nature made it the ratio of extent which moreover does not have effect in the taste highly. This juice presented the deep red wine color, and in the panel test, its flavor was good and it was able to obtain evaluation with the taste with the depth which was able to balance an acid taste and sweet taste. when the superoxide radical elimination activity value (antioxidation activity) which is a kind of active oxygen was measured by the ESR process, it has 1,000 units / ml, and was markedly alike compared with the general marketing soft drink, and the high value was shown.

[0015]

[Example 2] 0.51kg [ of Orange concentrated juice ] (Brix65), 0.45kg [ of Apple Computer concentrated juice ] (Brix74), and Carrots juice (Brix15.8) 3.3kg, 5.7kg [ of water which let the water purifier pass ], and rough catechin (60% of catechin content) 2.5g, and 0.2kg of mel low grape seed ethanol extracts were mixed, and the juice of Brix12.5 was adjusted. The ratio of a rough catechin was made into 0.025%, and antioxidation nature made it the ratio of extent which moreover does not have effect in the taste highly. This juice presents a red wine color still deeper than the example 1 of combination, in a panel test, its flavor is good, it is [ an acid taste is strong, ] cool, and was able to obtain evaluation with the taste which is moreover deep. when the superoxide radical elimination activity value (antioxidation activity) which is a kind of active oxygen was measured by the ESR process, it has 1,250 units / ml, and was markedly alike compared with the general marketing soft drink like the example 1 of combination, and the high value was shown.

[0016]

[Example 3] 4.32kg [ of water ] and rough catechin (60% of catechin content) 10g which let 0.68kg [ of Apple Computer concentrated juice ] (Brix74) and grape juice (Brix15.8) 5kg and a water purifier pass was mixed, and the juice of Brix13.5 was adjusted. The rough catechin content was made into 0.1%, and was made into the ratio of extent which does not have effect in the transparency and taste of juice. This juice presented transparency and light brown, and in the panel test, its flavor was good and it was able to obtain evaluation with the taste which an acid taste tends to drink weakly. when the superoxide radical elimination activity value (antioxidation activity) which is a kind of active oxygen was measured by the ESR process, it has 1,000 units / ml, and was markedly alike compared with the general marketing soft drink like the example 1 of combination, and the high value was shown.

[0017]

[Example 4] 0.3kg [ of strawberry concentrated juice ] (Brix65), 1.3kg [ of Apple Computer concentrated juice ] (Brix74), 8.4kg [ of water which let the water purifier pass ], and green tea extract rough catechin (60% of catechin content) 5g, and 0.1kg of KARBENE grape hide ethanol extracts were mixed, and the juice of Brix11.6 was adjusted. The ratio of a rough catechin was made into 0.05%, and antioxidation nature made it the ratio of extent which moreover does not have effect in the taste highly. This juice presented beautiful red, and in the panel test, its flavor was good and it was able to obtain evaluation with the taste with the depth which was able to balance an acid taste and sweet taste. when the superoxide radical elimination activity value (antioxidation activity) which is a kind of active oxygen was measured by the ESR process, it has 1,200 units / ml, and was markedly alike compared with the general marketing soft drink, and the high value was shown.

[0018]

[Effect of the Invention] Since this invention added the natural antioxidation object in two or more sorts of fruits juice and doubled that antioxidation nature, if it presents drink with this, effectiveness is in aging control and it has effectiveness remarkable also in inside cosmetics.

[0019] By having antioxidation nature, activation of the living body cell is carried out, and aging is controlled.

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[Translation done.]

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